WD

PATENT
Attorney Docket No. A-64383-2/RFT/KJC
Dorsey Matter # 467084-00042

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

CHAN *et al.*

Serial No. 09/355,214

Filed: July 23, 1999

For: BLNK PROTEINS

) Examiner: Lu, Frank Wei Min
)
) Art Unit: 1634
)
) CERTIFICATE OF MAILING
)
) I hereby certify that this correspondence, including listed enclosures, is being hand-carried to Examiner Frank Wei Min Lu at Cyrstal Mall I, Seventh Floor, on or about April 22, 2003
)
) Signed: _____

4/30/2003

please enter

RESPONSE TO TELEPHONE CONFERENCE WITH EXAMINER

The Assistant Commissioner for Patents

Washington D.C. 20231

Sir:

This communication is in response to the telephone conversation between Richard Trecartin and Examiner Lu on April 2, 2003, for the above- identified U.S. Patent Application.

While no fee is believed to be due, the Commissioner is authorized to charge any fees, including extension fees, which may be required, or credit any overpayment to Deposit Account No. 50-2319 (Our Order No. A-64383-2/RFT/DHR/KJC).

AMENDMENT TO THE SPECIFICATION

At page 1, line 1, immediately following the title, please amend the specification by replacing the paragraph pertaining to claim of priority to read as follows:

--This application is a ~~continuing~~ continuation in part application of U.S.S.N.s 08/819,013, filed now US patent No. 5,994,522
March 17, 1997, which is a continuing application of ~~and~~ 08/788,322, filed January 24, 1997--
now abandoned.

4/30/03

AMENDMENTS TO THE CLAIMS

Claims 1-34 **(cancelled)**

35. **(currently amended)** A recombinant BLNK protein, comprising an amino acid sequence having at least ~~about~~ 95% identity to the amino acid sequence set forth in SEQ ID NO:1 ~~and~~ wherein said recombinant BLNK protein specifically binds to ~~a~~ at least one protein selected from the group consisting of Grb2, PLCγ, Vav, and Nck .

36. **(previously added)** The recombinant BLNK protein according to Claim 35, wherein said BLNK protein comprises the amino acid sequence set forth in SEQ ID NO:1.

37. **(cancelled)**

38. **(previously added)** The recombinant BLNK protein according to Claim 35, wherein said BLNK protein comprises an amino acid sequence which lacks at least one tyrosine phosphorylation site corresponding to a tyrosine phosphorylation site selected from the group consisting of Tyr71, Tyr83, Tyr95 , Tyr177 and Tyr187 in SEQ ID NO:1.

39. **(currently amended)** A recombinant BLNK protein, wherein said BLNK protein comprises an amino acid sequence which is encoded by a nucleic acid sequence having at least ~~about~~ 95% identity to the nucleic acid sequence set forth in SEQ ID NO:2 and wherein said recombinant

BLNK protein specifically binds to at least one a protein selected from the group consisting of Grb2, PLCγ, Vav, and Nck.

40. **(previously added)** The recombinant BLNK protein according to Claim 39, wherein said BLNK protein comprises an amino acid sequence encoded by the nucleic acid sequence set forth in SEQ ID NO:2.

41. **(cancelled)**

42.**(previously added)** A pharmaceutical composition comprising the BLNK protein according to any one of Claims 35-36, 38 or ~~and~~ 40.

43. **(currently amended)** An antibody, which will bind to the BLNK protein according to any one of Claims 35-36, 38, 39 or ~~and~~ 40.

44. **(currently amended)** A method for screening for a bioactive agent which binds to a BLNK protein, comprising:

a) combining a BLNK protein and a candidate bioactive agent; and

b) determining the binding of said candidate bioactive agent to said BLNK protein;

wherein said BLNK protein comprises an amino acid sequence having at least ~~about~~ 95% identity to the amino acid sequence set forth in SEQ ID NO:1 and is capable of binding ~~binds~~ to a protein selected from the group consisting of Grb2, PLCγ, Vav, and Nck in the absence of said candidate bioactive agent.

45. **(currently amended)** A method for screening for a bioactive agent which modulates the activity of a BLNK protein, comprising:

a) combining a BLNK protein, a candidate bioactive agent, and a BLNK binding partner selected from the group consisting of Grb2, PLCγ, Vav, and Nck; and

b) determining the binding of said BLNK protein to said BLNK binding partner;

wherein said BLNK protein comprises an amino acid sequence having at least ~~about~~ 95% identity to the amino acid sequence set forth in SEQ ID NO:1, wherein said BLNK protein is capable of binding ~~binds~~ to said BLNK binding partner in the absence of a candidate bioactive agent, and wherein binding of said candidate bioactive agent inhibits said BLNK protein from binding to said BLNK binding partner.

46. **(previously added)** The recombinant BLNK protein, wherein said BLNK protein comprises the amino acid sequence set forth in SEQ ID NO:1.

47. **(previously added)** The recombinant BLNK protein, wherein said BLNK protein comprises an amino acid sequence encoded by the nucleic acid sequence set forth in SEQ ID NO:2.

REMARKS

Claims 35-36, 38-49 and 42-45 are pending. Claims 35, 39, 44 and 45 have been amended for clarity by deleting the term "about". The other claim amendments were made for clarification or suggested by the Examiner. No new matter is being added by way of this amendment. In addition the specification has been amended to reflect that this application is a continuation in part application of U.S.S.N.s 08/819,013, filed March 17, 2003 which is a continuing application of 08/788,322 filed January 24, 1997 . The claim amendments and amendment to the specification are presented in a revised format per the USPTO's announcement 'Amendments in a Revised Format Now Permitted', dated 31 January 2002. Accordingly, a complete listing of all claims that are, or were in the application, along with an appropriate status identifier, is provided above in the section entitled "Amendments to the Claims". On a separate sheet is a section entitled "Amendments to the Specification".

As per Examiner's request the Applicants are submitting a copy of the sequence listing from the corresponding PCT application for this national filing, a statement regarding the sequence and an accompanying computer readable disk which is identical to the paper copy already on file in this application (Exhibit A). Applicants submit that this communication and the accompanying computer readable sequence listing serve to place this application in condition of adherence to the rules 37 C.F.R. §§ 1.821-1.825.

Double Patenting Rejection

Claim 35-37 and 39-42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 5,994,522. The Examiner states that the conflicting claims are not patentably distinct.

Applicant submits the restriction requirement (Exhibit B) mailed September 30, 1997, from application serial No. 08/819,013, filed March 17, 1997 (the '013 application), now U.S Patent No.5,994,522 (the '522 patent), from which this application claims priority. The claims as originally filed in the '013 application are also enclosed (Exhibit C).

The above referenced restriction requirement and originally filed claims in the '013 application are submitted in response to the pending double patenting rejection set forth in the office action mailed January 24, 2003 (paper no.16) for this patent application. In this application, claims 35-37 and 39-42 are directed to BLNK proteins and methods for screening them. In contrast claims 1-7 in the '522 patent are directed to nucleic acids.

The above referenced restriction requirement in the '013 application set forth four groups for restriction. They are groups I drawn to nucleic acids, group II drawn to a method for making a protein, group III drawn to proteins, and group IV drawn to protein binding assay. Group I, claims 1-7, drawn to nucleic acids was selected for prosecution in the '013 application. Claims 35-37 and 39-42 of the present application are drawn to BLNK proteins which correspond to group III in the '013 application. They are therefore patentably distinct from claims 1-7 of U.S patent No. 5,994,522 and the double patenting rejection should be withdrawn.

The Applicants also note that the Information Disclosure Statement Form-1449 has one reference , listed as Cohen et al. that was not considered because the Examiner states that the date and reference were missing. Applicants note that this reference was considered in the parent case, application serial No. 08/819,013 and Applicants are providing not only the reference but also the IDS form-1449 submitted on November 17, 1999 which was signed by Examiner Zitomer in that case (Exhibit D). Applicants respectfully request that the Examiner sign as

considered , the reference herein referred to as Cohen et al. and return the signed IDS form-1449 for this patent application.

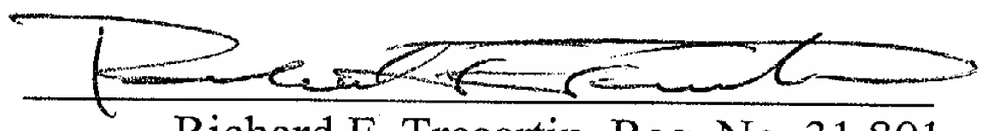
CONCLUSION

Applicants submit that the claims are now in condition for allowance and early notification to that effect is respectfully requested. If the Examiner feels there are further unresolved issues, the Examiner is respectfully requested to phone the undersigned at (415) 781-1989.

Respectfully submitted,

DORSEY & WHITNEY LLP

Dated: 4/21/03



Richard F. Trecartin, Reg. No. 31,801
Filed under 37 C.F.R. § 1.34(a)

Four Embarcadero Center, Suite 3400
San Francisco, California 94111
Telephone: (415) 781-1989
1108833

A

PATENT
Attorney Docket No. A-64383-2/RFT/KJC
Dorsey File No. 467084-00042

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

CHANet al.

Serial No.: 09/355,214

Filing Date: July 23, 1999

For: BLNK PROTEINS

Examiner: Lu, Frank Wei Min

Art Unit: 1634

CERTIFICATE OF MAILING

I hereby certify that this correspondence, including listed enclosures, is being hand-carried to Examiner Frank Wei Min Lu at Crystal Mall I, 7th Floor via messenger on or about April 22, 2003:

Dated:_____

Signed:_____

STATEMENT RE SEQUENCE LISTING

Commissioner for Patents
U.S. Patent and Trademark Office
BOX SEQUENCE, P.O. Box 2327
Arlington, VA 22202

Sir:

This communication is in response to the telephone conversation between Richard Trecartin and examiner Lu on April 2, 2003. While no fee is believed to be due, the Commissioner is authorized to charge any additional fees, including extension fees or other relief which may be required, or credit any overpayment to Deposit Account No. 50-2319 (Our Order No. 467084-00042 (A-64838-2/RFT/KJC)).

This communication is accompanied by a floppy disk containing the Sequence Listing in computer readable form. The information contained in the computer readable disk is identical to that of the paper copy already on file in this application. Applicant submits that this communication and the accompanying computer readable sequence listing serve to place this application in a condition of adherence to the rules 37 C.F.R. § 1.821-1.825.

Serial No.: 09/355,214
Filing Date: July 23, 1999

Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Respectfully submitted,
DORSEY & WHITNEY LLP

Dated: 4/21/03

BY: _____
Richard F. Trecartin, Reg. No. 31,801
Filed under 37 C.F.R. § 1.34(a)

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Dorsey & Whitney LLP
Intellectual Property Department
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San Francisco, CA 94111-4187
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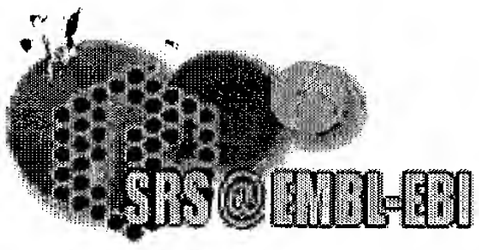
Facsimile: (415) 398-3249

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DT   12-DEC-1997 (Rel. 53, Created)
DT   04-AUG-1998 (Rel. 56, Last updated, Version 4)
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DE   Mus Musculus mRNA for B cell specific protein
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OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia;
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RN   [1]
RP   1-1739
RA   Cohen P.L.;
RT   ;
RL   Submitted (11-DEC-1997) to the EMBL/GenBank/DDBJ databases.
RL   Cohen P.L., Medicine, Division of Rheumatology/Immunology, University of
RL   North Carolina at Chapel Hill, CB 7280, 3330 Doc J. Thurston Jr. Bldg., NC,
RL   27599, USA.
XX
RN   [2]
RX   MEDLINE; 98346794.
RX   PUBMED; 9683264.
RA   Gangi-Peterson L., Peterson S., Shapiro L., Golding A., Caricchio R.,
RA   Cohen D.I., Margulies D.H., Cohen P.L.;
RT   "Bca -- An Activation-related B-cell Gene";
RL   Mol. Immunol. 35:55-63(1998).
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File A-64383-1 Atty RFT/RMS

Due Date 10/30/97

Type Imm Resp Refs 9

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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, DC 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/831,013	03/17/97	CHAN A	A-64383-1/RF

18M2/0930

FLEHR HOHBACH TEST ALBRITTON HERBERT
FOUR EMBARCADERO CENTER
SUITE 3400
SAN FRANCISCO CA 94111-4187

EXAMINER	
ZITOMER,S	

ART UNIT	PAPER NUMBER
1807	

DATE MAILED: 09/30/97

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-90C (REV. 2/95)

2-Mail Copy

Office Action Summary	Application No. 08/819,013	Applicant(s) Chan et al.
	Examiner Stephanie Zitomer	Group Art Unit 1807

☐ Responsive to communication(s) filed on _____ .

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *ONE* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-20* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☐ Claim(s) _____ is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims *1-20* are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

RESTRICTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-8, drawn to nucleic acids, classified in class 536, subclass 23.1;

II. Claim 9, drawn to a method for making a protein, classified in class 435, subclass 69.1;

III. Claims 10-17, drawn to proteins, classified in class 530, subclass 350;

IV. Claims 18-20, drawn to protein binding assay, classified in class 435, subclass 7.1.

2. Inventions I, III and II, IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the nucleic acids and proteins can be used in a process of enzymatic or chemical cleavage to obtain monomer products.

3. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together, or they have different modes of operation, or they have different functions, or they have different effects. (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together as it has not been shown, e.g., that the proteins bind the nucleic acids and they used separately in the claimed invention assays.

4. Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together, or they have different modes of operation, or they have different functions, or they have different effects. (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operation, i.e., different method steps; different functions as invention II is a method for making a protein whereas invention IV is an assay.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art due to their recognized divergent subject matter restriction for examination purposes as indicated is proper.

6. A telephone call was made to Robin Silva on September 22, 1997 to request an oral election to the above restriction requirement, but did not result in an election being made.

7. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephanie Zitomer whose telephone number is (703) 308-3985. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones, can be reached on (703) 308-1152. The official fax phone number for this Group is (703) 305-3014 or (703) 308-4242. The unofficial fax number is (703) 305-7401.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Stephanie W. Zitomer, Ph.D.
September 29, 1997

STEPHANIE W. ZITOMER
PRIMARY EXAMINER

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SRS 7.0.2 | feedback

CLAIMS

We claim:

1. A recombinant nucleic acid encoding a BLNK protein.

2. A recombinant nucleic acid according to claim 1 wherein said BLNK protein is a human BLNK protein.

3. A recombinant nucleic acid according to claim 1 encoding the amino acid sequence depicted in Figure 1.

4. A recombinant nucleic acid according to claim 1 which will hybridize to the nucleic acid depicted in Figure 2 under high stringency conditions.

5. A recombinant nucleic acid according to claim 1 comprising the nucleic acid depicted in Figure 2.

6. An expression vector comprising transcriptional and translational regulatory DNA operably linked to DNA encoding a BLNK protein.

7. A host cell transformed with the nucleic acid of claim 1.

8. A host cell transformed with an expression vector according to claim 6.

9. A method of producing a BLNK protein comprising:

a) culturing a host cell transformed with nucleic acid encoding a BLNK protein; and

b) expressing said nucleic acid to produce a BLNK protein.

10. A recombinant BLNK protein.

11. A recombinant BLNK protein according to claim 10 encoded by a nucleic acid which hybridizes to the nucleic acid sequence shown in Figure 2.

12. A recombinant BLNK protein according to claim 10 which is at least about 50% homologous to the amino acid sequence shown in Figure 1.

13. A recombinant BLNK protein according to claim 10 which has the amino acid sequence shown in Figure 1.

14. A pharmaceutical composition comprising a BLNK protein.

15. A polypeptide capable of specifically binding to a BLNK 1 protein.

16. A polypeptide according to claim 15 wherein said polypeptide is an antibody.

17. An antibody which binds a BLNK protein.

18. A method for detecting a BLNK protein in a target sample comprising contacting a labelled polypeptide according to claim with said target sample and assaying for the presence of binding between said labelled polypeptide and BLNK, if present, in said target sample.

19. A method for screening for a bioactive agent capable of modulating the bioactivity of a BLNK protein, said method comprising combining a BLNK protein and a candidate bioactive agent, and determining the binding of said candidate agent to BLNK protein.

20. A method for screening for a bioactive agent capable of modulating the bioactivity of a BLNK protein, said method comprising the steps of:

a) combining:

i) a BLNK protein;

ii) a candidate bioactive agent; and

iii) a protein selected from the group consisting of Grb2 and PLC-γ; and

b) determining the binding of said protein to said BLNK protein;

wherein the absence of binding of said protein to said BLNK protein indicates that said agent is capable of modulating the bioactivity of said BLNK protein.